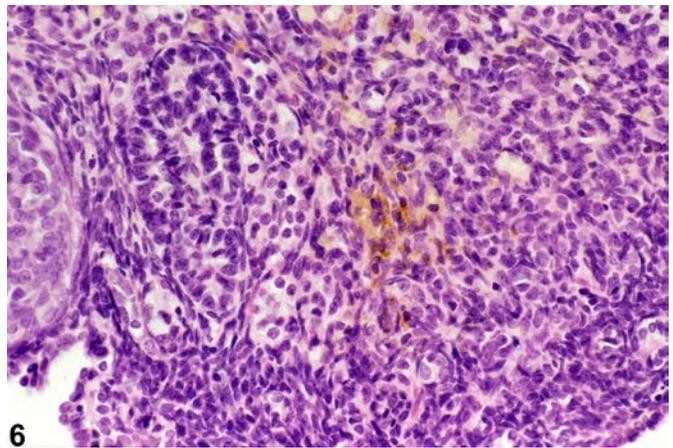
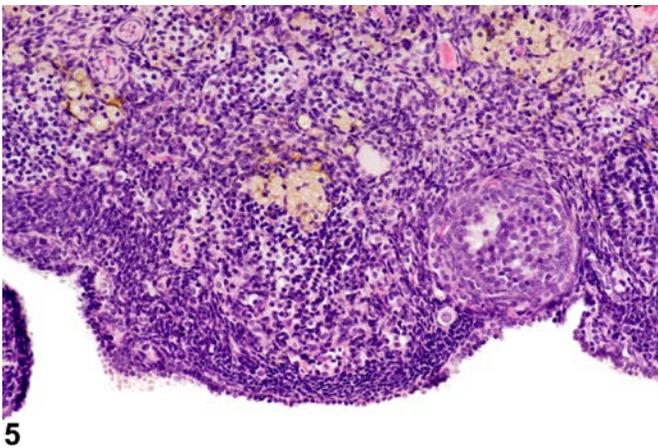
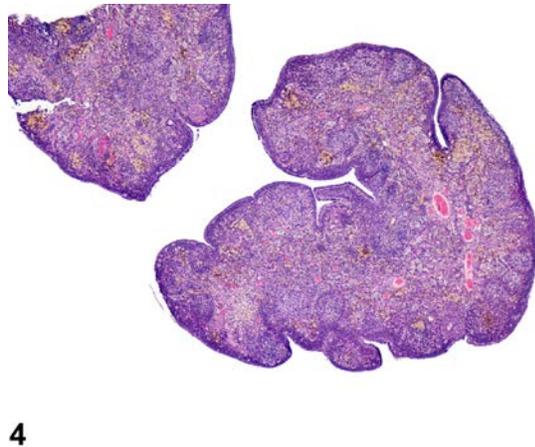
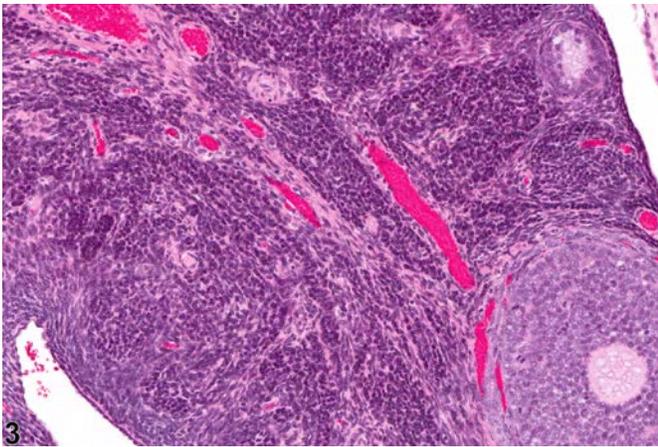
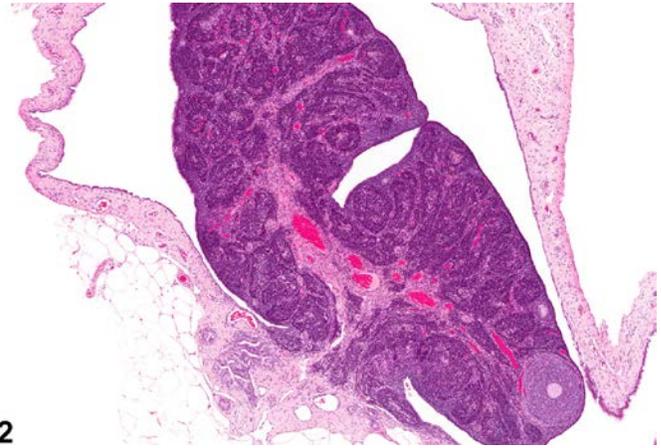
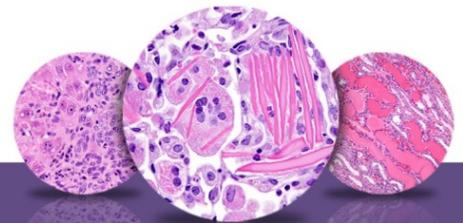


NTP Nonneoplastic Lesion Atlas

Ovary – Atrophy





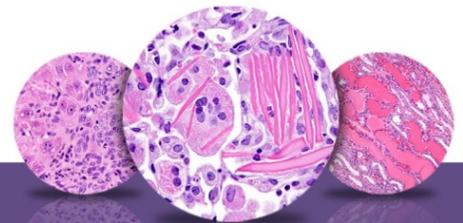
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Figure Legend: **Figure 1** Ovary - Atrophy in a female F344/N rat from a chronic study. The ovary is small and lacking follicles and corpora lutea. **Figure 2** Ovary - Atrophy in a female F344/N rat from a chronic study (higher magnification of Figure 1). Few follicles are evident. **Figure 3** Ovary - Atrophy in a female F344/N rat from a chronic study (higher magnification of Figure 1). There are few follicles, and no corpora lutea is present. **Figure 4** Ovary - Atrophy in a female F344/N rat from a chronic study. The ovary is small and lacks follicles and corpora lutea. **Figure 5** Ovary - Atrophy in a female F344/N rat from a chronic study (higher magnification of Figure 4). There are pigmented interstitial cells, an atretic follicle, and lack of corpora lutea. **Figure 6** Ovary - Atrophy in a female F344/N rat from a chronic study (higher magnification of Figure 4). There are pigmented interstitial cells and residual granulosa cells.

Comment: Ovarian atrophy occurs with age (senescence) or may result from administration of drugs or exposure to chemicals that block or suppress trophic control of the ovary. Ovarian atrophy is defined as decreased ovarian size and weight and decreased numbers of oocytes, developing follicles, and corpora lutea (Figure 1, Figure 2, and Figure 3). Atrophic ovaries are small, with a conspicuous absence of follicles and corpora lutea and the presence of increased stroma, with frequent prominent pigment in the interstitium (Figure 4, Figure 5, and Figure 6). Atrophy occurs more frequently in B6C3F1 mice than in F344 rats in NTP carcinogenicity studies. Additional findings associated with ovarian atrophy may be diagnosed separately if deemed relevant and may provide information as to pathogenesis of atrophy in toxicity or carcinogenicity studies. These findings may include interstitial cell hyperplasia, necrosis of follicular epithelium, increased numbers of cystic follicles, accumulation of pigment or lipid, cholesterol clefts, hyaline degeneration of corpora lutea, fibrosis, and mineralization.

Recommendation: Ovary - Atrophy should be recorded and graded only when treatment related. It is important to distinguish treatment-related atrophy from senescence, and atrophic lesions associated with senescence should not be diagnosed. When atrophy is treatment related, it is important to describe the changes present in the ovary in the pathology narrative. The pathologist should also check for secondary atrophy of uterus and vagina and associated changes in mammary tissue. Ovary – Atrophy is a suitable diagnosis for a short-term study. If treatment-related ovarian atrophy is diagnosed, notify NTP that more detailed studies (e.g., counts of primordial, primary, and antral follicles and corpora lutea) may be warranted.



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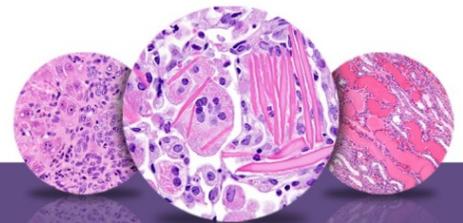
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